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## Towards Global Service Quality Dimensions: an Exploration of Commonality in Service Quality Measurement across Industries

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### Abstract

*Services and service quality have become increasingly important competitive differentiators for firms, as well as contributors to national economies. Due to the relative uniqueness of each service, there is little consensus on the dimensions for service quality evaluation. The best known and most widely used of several instruments for measuring service quality is SERVQUAL (1988). Yet, tests of SERVQUAL's reliability and validity have been mixed. This paper presents results from cross-referencing seven service quality measurement models from seven different industries, with SERVQUAL. Results indicate that only the 'assurance' and 'empathy' dimensions are represented across all seven industries, while other attributes in the various industry-instruments either map partially or did not map onto SERVQUAL's (1988) five dimensions. From the mappings, several important gaps in the industry instruments are identified. These results suggest potential from a harmonized set of global service quality dimensions.*

### Keywords

Service quality, Service evaluation, Service quality dimensions, Service quality measurement, SERVQUAL

### Introduction

Services are the largest and fastest growing sector in developed countries. In Europe, the service sector accounts for between 60 and 80 percent of the Gross Domestic Product (GDP) (Sundbo & Gallouj 1999). During the 2004-05 financial years, the services-producing industries' overall contribution to the total production of goods and services in the Australian economy (gross domestic product - GDP) was 56%. Average annual total employment in the Australian service industries in 2005-06 was 7,530,600 people, which represented 75% of all employment (Trewin 2007). To maintain customer-bases and compete effectively in the international service markets, organizations must be able to measure and maintain the quality of their services at a level that meets or exceeds the expectations of their customers.

Conceptually, service quality is defined as "the global overarching judgment or attitude relating to the overall excellence or superiority of the service" (Parasuraman, Berry & Zeithaml 1988). Since the 1980s, increasingly industries and researchers have turned their attention to the quality of services (Brogowicz, Delene & Lyth 1990). Across different industries, there are many interpretations of the term 'service quality'. While there has been considerable progress on how service quality perceptions should be measured, there is little consensus on *what* should be measured. And though it is apparent that the perceptions of service quality are based on multiple dimensions, there is no agreement as to the nature or content of these dimensions (Brady & Cronin 2001). In example, within the banking sector there are several service quality models that consist of varying dimensions: Mersha and Adlaka (1992) suggest twelve dimensions (knowledge of the service, thoroughness / accuracy, consistency / reliability, reasonable cost, willingness to correct errors, timely / prompt service, lack of knowledge of the service, employees' indifference, reluctance to correct errors, service inconsistency, sloppiness, high cost); Ennew et al. (1993) suggest eleven dimensions (knows business, knows industries, knows market, gives helpful advice, wide range of services, competitive interest rates, competitive charges, speed of decision, tailors finance, deal with one person, easy access to loan officer); Avkiran (1994) suggests four dimensions (staff conduct, credibility, communication, access to teller services); Aldlaigan and Buttle (2002) suggest four dimensions (service system quality, behavioral service quality, service transactional accuracy, machine service quality);

Allred and Addams (2000) suggest five dimensions (reliability, responsiveness, competence, access, communication).

A variety of instruments exist for measuring service quality, the most widely-used being SERVQUAL. Most others are based on SERVQUAL (Seth, Deshmukh & Vrat 2005), thereby making SERVQUAL the appropriate benchmark for comparison of instruments and service quality measurement models.

The early work on SERVQUAL defined ten common attributes of services (Parasuraman, Berry & Zeithaml 1985) which were later revised to five (Parasuraman, Berry & Zeithaml 1988). Over time, several researchers have tried to adopt the dimensions of SERVQUAL (Parasuraman, Berry & Zeithaml 1988) in specific industries, but have later felt compelled to revise the SERVQUAL dimensions (either partially or totally) due to their perceived unsuitability (Kilbourne et al. 2004) - In example, removal of the 'tangibles' dimension (Ketinger & Lee 1994); the combination of the 'reliability' and 'responsiveness' dimensions (Dean, Alison M 1999); and the removal of the 'assurance' dimension (Kilbourne et al. 2004). Asubonteng et al. (1996) concluded that the differences in the number and selection of dimensions appear to be linked to differences across the industries.

In-line with the initial intentions of SERVQUAL (Parasuraman, Berry & Zeithaml 1985) and given the variety of service quality attributes in the extant literature, it is timely to re-examine service quality attributes, the aim being to classify these in a global model that would reflect a potential set of best practices, and that would facilitate the benchmarking of service quality across industries. The preliminary study reported herein, is part of a larger research project, the overarching goal of which is to understand how best to evaluate the quality of services. The larger research project aims to develop a deep understanding of salient, high-level and generalizable conceptions of services, service types, the service forms continuum, the service lifecycle, and the 'qualities' of these various service conceptions. A holistic perspective will be initially sought through: (1) inventorying existing conceptions as reflected explicitly and implicitly in the literature and existing instruments; and through (2) interviewing a diverse and representative range of service 'experts'; (3) these interviews also seeking to describe the contemporary continuum of services through supplying, sharing, sourcing and systematizing. These experts will be diverse and representative in-terms of their varying conceptions and foci on service types, life-cycle phase(s) and service forms. Main intended outcomes of the study are compelling high-level conceptions, thereby facilitating harmonized terminology for the description, decomposition, analysis and reconstitution, and decision making on services - across all service types, the full services lifecycle, and the full continuum of service forms.

This paper addresses step (1) of the larger research project. It attempts to inventory existing service quality dimensions drawn from a variety of industries to discover commonality and exceptions across these industry-based conceptual models. The research entails a literature review of service quality models and a comparative mapping of the dimensions (attributes) of service quality against a well-known service quality model (SERVQUAL) (Parasuraman, Berry & Zeithaml 1988). By conducting the comparative mapping exercise, the author is able to identify commonalities (classified attributes) that reflect what seems to be global; and exceptions (unclassified attributes) that reflect what is present but not encompassed by SERVQUAL. Unclassified attributes illustrate the gaps within SERVQUAL.

## **Literature Review**

### **Definitions of Service Quality**

Researchers have defined service quality in-terms of subjectivity, attitude and perception (Allred & Addams 2000) in attention to three unique features of services namely - intangibility, heterogeneity and inseparability. These unique features form an elusive and abstract service quality construct that is difficult to define and measure (Cronin & Taylor 1992; Parasuraman, Berry & Zeithaml 1988). Several definitions of service quality differentiate what the customer feels should be offered (expectations) and what is actually delivered (perceptions) (Jiang et al. 2003) and the global overarching judgment or attitude relating to the overall excellence or superiority of the service (Parasuraman, Berry & Zeithaml 1988).

### **Conceptualizations of Service Quality**

Conceptualizations of service quality are based on two distinct schools led by Parasuraman, Berry and Zeithaml (1985; 1988) and Gronroos (1982; 1990), or alternatively called "the North American School" and "the Nordic School" respectively (Brogowicz, Delene & Lyth 1990). Researchers have generally adopted one of these two conceptualizations (Brady & Cronin 2001).

The Nordic School noted that service quality, as perceived by customers, consists of two dimensions namely (1) functional quality and (2) technical quality. Functional quality refers to the service delivery process and technical quality refers to the service quality outcomes (Gronroos 1982, 1990). Kang (2006) observes that SERVQUAL focuses on the functional quality aspect, but neglects the technical quality aspect.

The North American School identified five dimensions that customers use to evaluate service quality: tangibles, reliability, responsiveness, assurance and empathy (Parasuraman, Berry & Zeithaml 1988). The identified dimensions gave birth to a service quality measurement tool called SERVQUAL.

### Introducing 'SERVQUAL' – A Service Quality Measurement Tool

The initial SERVQUAL measurement tool (survey instrument) was developed based on a set of focus group interviews of consumers and in-depth interviews of executives in four nationally recognized service firms. Their responses fell into ten key dimensions (Parasuraman, Berry & Zeithaml 1985) which were later revised to five dimensions that are measured by 22 statements (Parasuraman, Berry & Zeithaml 1988).

The definitions of the ten dimensions (Parasuraman, Berry & Zeithaml 1985) are as follows: *Tangibles* - appearance of physical facilities, equipment, personnel and communication materials; *Reliability* - ability to perform the promised service dependably and accurately; *Responsiveness* - willingness to help customers and provide prompt service; *Competence* - possession of the required skills and knowledge to perform the service; *Courtesy* - politeness, respect, consideration and friendliness of contact personnel; *Credibility* - trustworthiness, believability and honesty of the service provider; *Security* - freedom from danger, risk or doubt; *Communication* - keeping customers informed in the language that they can understand and listening to them; *Access* - approachability and ease of contact; *Understanding the customer* - making the effort to know customers and their needs. Over time, only the 'tangibles', 'reliability' and 'responsiveness' dimensions from the original SERVQUAL(1985) remained while the 'competence', 'courtesy', 'credibility', 'security' and 'communication' dimensions formed the 'assurance' dimension which is defined as knowledge and courtesy of employees and their ability to convey trust and confidence. The 'access' and 'understanding the customer' dimensions formed the 'empathy' dimension which is defined as caring, individualized attention the firm provides its customers (Parasuraman, Berry & Zeithaml 1988). Service quality for each of the five dimensions is captured by a gap score (G) which is the comparison of expectations (E) and perceptions (P), or by the formula  $G = P - E$  where 'P' and 'E' represent the average ratings of a dimension's corresponding 'P' and 'E' statements (Jiang et al. 2003).

The purpose of the SERVQUAL tool is to provide a basic "skeleton" (group of core evaluation criteria) underlying service quality, that would transcend multiple measurement contexts and provide managers with deeper insights concerning areas (dimensions) for improvement.

While managers find the SERVQUAL concept of gap measurement useful: it provides superior managerial diagnostic capability (Jiang, Klein & Carr 2002) by indicating service quality strengths and shortfalls (Kettinger & Lee 1997; Pitt, Watson & Kavan 1997), the reliability of SERVQUAL's (1988) dimensions has been questioned. Test results have suggested that the 'tangibles' dimension is made up of two parts, namely (1) appearance and (2) hardware and software (Pitt, Watson & Kavan 1995). There too have been studies where respondents confuse the 'responsiveness', 'assurance' and 'empathy' dimensions because they are closely aligned and semantically similar (Pitt, Watson & Kavan 1995). Finally, Dyke et al. (1997) maintain that there are conceptual problems and empirical difficulties with the five-dimensional SERVQUAL(1988) tool when applied in the Information Systems (IS) context. Another criticism is the reliance on gap scores (Kettinger & Lee 2005).

### Research Method

The objectives of this paper are to (1) form an understanding of the service quality dimensions that exist in the various industries, (2) identify commonalities and exceptions that are or are not reflected in SERVQUAL(1988), and (3) identify any gaps within the industries' evaluation of service quality.

This research is exploratory and it treats literature as evidence. Relevant literature (service quality literature from various industries) was collected by utilizing online databases (E.g: Emerald, ProQuest, etc) by searching for key phrases such as 'service quality', 'service measurement', 'service evaluation', etc. From the collection of relevant literature, seven different industries were identified and a corresponding service quality model for each industry was located. Data on the seven different industries was tabulated into Table 1 and mapped against the ten and five SERVQUAL dimensions. Finally, a reverse-mapping of the five-dimensional SERVQUAL(1988) onto the various service quality models was conducted (Table 2) with the intention of identifying which SERVQUAL(1988) dimensions have been excluded but might be beneficial to include.

## Mapping of Service Quality Dimensions

From the collection of service quality dimensions and descriptions identified from the seven industries, this preliminary study attempts to map these dimensions firstly onto SERVQUAL's ten dimensions (Parasuraman, Berry & Zeithaml 1985), followed by onto SERVQUAL's five dimensions (Parasuraman, Berry & Zeithaml 1988).

The mapping process is as follows: (1) For each of the dimensions within a particular industry model, its dimensional description was compared with the description of each of SERVQUAL's ten and five dimensions to find commonality in meanings; (2) Should commonality be found, the appropriate SERVQUAL dimension(s) would be mapped onto that particular industry model's dimension. Steps (1) and (2) were repeated for all the dimensions of all seven industry models. *Table 1* illustrates these mappings of service quality dimensions.

Table 1: Mapping of dimensions of service quality in various industries to SERVQUAL

Industry (Context)	Dimension	Explanation Of Dimension	Mapping Of Dimension To SERVQUAL's (1985) 10 dimensions	Mapping Of Dimension To SERVQUAL's (1988) 5 dimensions
<b>Call centers</b> (Dean, Alison M. 2002)				
	<b>Adaptiveness</b>	Ability to solve and help to interpret different customer problems and questions.	<i>Competence</i>	<i>Assurance</i>
	<b>Assurance</b>	To clearly explain the steps in the procedure of solving the customer's question and to explain exactly for what purposes the customer's information would be used by the firm.	<i>Competence</i>	<i>Assurance</i>
	<b>Empathy</b>	To empathize with the customer's situation and give the customer a feeling that the customer and his/her problem are important to the firm.	<i>Understanding the customer</i>	<i>Empathy</i>
	<b>Authority</b>	The authority and the ability to perform the required tasks.	<i>Competence</i>	<i>Assurance</i>
<b>Web-based Information Systems (WIS)</b> (Tan, Xie & Li 2003)				
	<b>Reliability</b>	The ability of the WIS to provide accurate information and to perform the promised service.	<i>Reliability</i>	<i>Reliability</i>
	<b>Responsiveness</b>	The ability of the WIS to perform the web-based service consistently and accurately.	<i>Responsiveness</i>	<i>Responsiveness</i>
	<b>Access</b>	Quick access to the site and the company when needed.	<i>Access</i>	<i>Empathy</i>
	<b>Flexibility</b>	Choices of way to pay, ship, buy, search for and return items.	<i>Unclassified</i>	<i>Unclassified</i>
	<b>Ease of navigation</b>	Intuitive on-page navigation to improve ease-of-use.	<i>Communication</i>	<i>Assurance</i>
	<b>Efficiency</b>	Simplicity of usage.	<i>Unclassified</i>	<i>Unclassified</i>
	<b>Assurance / trust</b>	The ability of WIS to convey trust and confidence.	<i>Assurance</i>	<i>Assurance</i>
	<b>Security</b>	Customers' confidence in the safety of the site from intrusion and protection of privacy.	<i>Security</i>	<i>Assurance</i>
	<b>Site aesthetics</b>	The appearance of the site	<i>Tangibles</i>	<i>Tangibles</i>
	<b>Customization / personalization</b>	The ability of WIS to provide caring and individual attention.	<i>Understanding the customer</i>	<i>Empathy</i>
	<b>Quality of information</b>	The ability of WIS to provide quality information.	<i>Unclassified</i>	<i>Unclassified</i>
<b>Academic libraries</b> (Nagata et al. 2004)				
	<b>Effect of service (personal)</b>	Scenarios where library staffs serve the customer in association with the service encounter.	<i>Unclassified</i>	<i>Unclassified</i>
	<b>Library as ba (place)</b>	Composed of not only of physical elements such as reading rooms and study rooms, but also mental aspects of quietness, comfort and exchanges with other users and library staff.	<i>Unclassified</i>	<i>Unclassified</i>
	<b>Collection and access</b>	Materials and information the library offers such as convenient access to library collections, availability of required information and timely document delivery.	<i>Reliability, responsiveness</i>	<i>Reliability, responsiveness</i>
	<b>Effect of service (organizational)</b>	Assuring users of the accuracy and confidentiality of their personal information / data and keeping users informed about when services will be performed.	<i>Security, communication</i>	<i>Assurance, empathy</i>

<b>E-service</b> (Santos 2003)				
	<b>Reliability</b>	Ability to perform the promised service accurately and consistently including frequency of updating the web site, prompt reply to customer enquiries and accuracy of on-line purchasing and billing.	<i>Reliability, responsiveness, credibility</i>	<i>Reliability, responsiveness, assurance</i>
	<b>Efficiency</b>	Speed of downloading, search and navigation.	<i>Unclassified</i>	<i>Unclassified</i>
	<b>Support</b>	Technical help, user guidelines and personal advice available to customers from a web site.	<i>Understanding the customer, responsiveness</i>	<i>Empathy, responsiveness</i>
	<b>Communication</b>	Keeping customers properly informed and communicating with them in a language they can understand.	<i>Communication</i>	<i>Assurance</i>
	<b>Security</b>	Freedom from danger, risk or doubt during the service process.	<i>Security</i>	<i>Assurance</i>
	<b>Incentive</b>	Encouragement given by web providers to consumers to browse and use the web site including rewards for doing so.	<i>Unclassified</i>	<i>Unclassified</i>
<b>Education</b> (Joseph & Joseph 1997)				
	<b>Academic reputation</b>	Prestigious degree program, recognized nationally and internationally and which has excellent instructors.	<i>Credibility</i>	<i>Assurance</i>
	<b>Program issues</b>	The availability of specialist programs, degree flexibility, a practical component in the degree, the availability of several course options and flexible entry requirements.	<i>Responsiveness</i>	<i>Responsiveness</i>
	<b>Physical facilities</b>	Excellent academic, accommodation and sports and recreational facilities as well as an appealing campus layout.	<i>Tangibles</i>	<i>Tangibles</i>
	<b>Cost / time</b>	Length of time it takes to complete a degree and the costs involved in doing so.	<i>Unclassified</i>	<i>Unclassified</i>
	<b>Location</b>	Geographical location of the institute.	<i>Access</i>	<i>Empathy</i>
	<b>Career opportunities</b>	How employable will students be after getting a degree from a specific institution and the information the institute provided on career opportunities.	<i>Security</i>	<i>Assurance</i>
	<b>Other</b>	Influence of word-of-mouth communication as well as of family and peers when selecting a university.	<i>Communication</i>	<i>Empathy</i>
<b>Banks And Credit Unions</b> (Allred & Addams 2000)				
	<b>Reliability</b>	Accurate, consistent, dependable performance.	<i>Reliability, credibility</i>	<i>Reliability, assurance</i>
	<b>Responsiveness</b>	The willingness and capabilities of employees.	<i>Responsiveness</i>	<i>Responsiveness</i>
	<b>Competence</b>	Skill the knowledge to provide expected service at all levels of the organization.	<i>Competence</i>	<i>Assurance</i>
	<b>Access</b>	Ease of contact, convenient hours, minimal waiting time and approachability of employees.	<i>Access</i>	<i>Empathy</i>
	<b>Communication</b>	Using language that the customer can understand and sincerely listening to the customer.	<i>Communication</i>	<i>Assurance</i>
<b>Retail</b> (Siu & Cheung 2001)				
	<b>Personal interaction</b>	Individual attention, knowledge and responsiveness of the employee.	<i>Understanding the customer, responsiveness</i>	<i>Empathy, responsiveness</i>
	<b>Policy</b>	Matter of return / exchange, quality of merchandise, operating hours as well as safely and error-free transactions.	<i>Credibility, security</i>	<i>Assurance</i>
	<b>Physical appearance</b>	Visually appealing physical facilities, equipment and service material.	<i>Tangibles</i>	<i>Tangibles</i>
	<b>Promises</b>	Trustworthiness of the department store perceived by its customers.	<i>Credibility</i>	<i>Assurance</i>
	<b>Problem solving</b>	Handling customers' complaint directly and immediately, sincere interest to solve problem and clean, attractive and convenient public areas.	<i>Responsiveness, credibility</i>	<i>Responsiveness, assurance</i>
	<b>Convenience</b>	Convenience of store layout and the availability of merchandise.	<i>Access, reliability</i>	<i>Empathy, reliability</i>

## Discussion

From Table 1, it is observed that the ‘*assurance*’ and ‘*empathy*’ dimensions are common to all seven industries. The ‘*reliability*’ dimension occurs in five out of the seven industries and did not occur in the call center and education industries. The ‘*tangibles*’ dimension occurs in three of the seven industries and did not occur in the call center, academic libraries, E-service and banks and credit unions industries. The ‘*responsiveness*’ dimension occurs in six out of the seven industries and did not occur in the call center industry.

Attributes that are unmapped (unclassified) include flexibility, efficiency, quality of information (Tan, Xie & Li 2003), effect of service, library as ba, collection and access (Nagata et al. 2004), efficiency, incentive (Santos 2003) and cost / time (Joseph & Joseph 1997). Several of the unmapped attributes like ‘quality of information’ (Tan, Xie & Li 2003), ‘effect of service’, ‘library as ba’ (Nagata et al. 2004) and ‘cost / time’ (Joseph & Joseph 1997) could be classified as dimensions of technical quality because they seem to represent outcomes of a service.

Next, an attempt was made to map the five dimensions of SERVQUAL(1988) onto the various service quality models. Table 2 illustrates these mappings.

Table 2: Mapping of SERVQUAL’s (1988) five dimensions onto service quality models

SERVQUAL’s (1988) 5 Dimensions	Service Quality Models
Reliability	Web-based Information Systems (WIS), Academic libraries, E-service, Banks and credit unions, Retail (5)
Assurance	Call centers, WIS, Academic libraries, E-service, Education, Banks and credit unions, Retail (7)
Tangibles	WIS, Education, Retail (3)
Empathy	Call centers, WIS, Academic libraries, E-service, Education, Banks and credit unions, Retail (7)
Responsiveness	WIS, Academic libraries, E-service, Education, Banks and credit unions, Retail (6)

From Table 2 several gaps in-relation to the evaluation of service quality are observed. The evaluation of service quality in the call center industry might be improved through the inclusion of the ‘reliability’ and ‘responsiveness’ dimensions. Staff would benefit from complementing the head-knowledge of solving and interpreting customers’ problems and questions (assurance) with taking the initiative and be willing (responsiveness) to perform the service dependably and accurately (reliability). The evaluation of service quality in the E-service industry might be improved through the inclusion of the ‘tangibles’ dimension because a well organized and intuitive site might better facilitate customers in their online endeavors. The evaluation of service quality in the education industry might be improved through the inclusion of the ‘reliability’ dimension. The abilities of staff in performing their tasks accurately might influence the students’ learning. This in-turn might contribute to the school’s reputation through the students’ results. The evaluation of service quality in the bank and credit union industry might be improved through the inclusion of the ‘tangibles’ dimension because the appearance of their staffs might reflect their authenticity of service to the customers.

## Limitations of Study

This preliminary study did not cover all available service quality literature and the mappings of dimensions are based on the dimensions of SERVQUAL and the dimensions from the seven different industries.

## Conclusion

This preliminary study focuses on the theory of the North American school and introduces a well-known and popular service quality tool (SERVQUAL) together with its advantages, disadvantages and critics. This preliminary study attempts to highlight the global applicability of the five-dimensional SERVQUAL in seven different industries and identify any gaps within the industries’ evaluation of service quality by conducting two mapping exercises. From the mappings in Table 1, it seems conclusive that only the ‘assurance’ and ‘empathy’ dimensions are global across the seven different industries while the other attributes in the various industries seem to either map partially or did not map onto SERVQUAL’s (1988) five dimensions. From the mappings in Table 2, several gaps have been identified in call centers, E-service, education and banks and credit unions. Service quality in call centers might be improved through the inclusion of the ‘reliability’ and ‘responsiveness’ dimensions. Service quality in E-services might be



improved through the inclusion of the 'tangibles' dimension. Service quality in education might be improved through the inclusion of the 'reliability' dimension. Service quality in banks and credit unions might be improved through the inclusion of the 'tangibles' dimension.

## Future Research

This preliminary study plans to gain a better understanding of service quality which would be sought through: (1) reviewing more service quality literature from various industries; (2) conducting a grounded survey on more focus groups and executives from a larger pool of service industries. Step (1) is exploratory and treats literature as evidence. It involves compiling a more comprehensive analysis of service quality data from literature from the various industries. Step (2) consists of in-depth interviews with selected individuals in the target industries and the administration of surveys. Two surveys would be conducted on the larger target industries with firstly an identification survey to identify the salient dimensions of service quality and secondly, a confirmation survey to confirm these dimensions. The former and latter statements would give birth to an improved global service quality model and the next logical step to take is to operationalize the model.

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